Economic Impacts of Zebra & Quagga Mussel Infestations

Invasive mussel infestations have significant economic costs. Most economic impact assessments associated with mussel invasion are based on costs incurred by industries operating dams, diversions, power and water treatment plants, and associated losses to the local economy and tax base. Estimates in the U.S. indicate that hydropower industries are incurring $1 billion dollars annually to maintain their operations after mussels invade, and estimated annual economic losses suffered by regions in the event of a mussel infestation are staggering:

- $100s of millions annually in the Columbia River Basin;
- $94.5 million annually to the State of Idaho; and
- $22.4 million annually in the Lake Tahoe region.

Unfortunately, most economic impact assessments do not include costs to irrigators and agriculture. Therefore, the economic costs associated with AIS are significantly underestimated.

Water System costs for zebra mussels:

- $7.2 million in capital costs and an additional $10 to 15 million annually for the Metropolitan Water District, CA. Long term capital costs unknown
- $26 million in capital costs and an additional $1 to 4 million annually for operation and maintenance for the Southern Nevada Water Authority.
- Hydropower: $8,800 in capital costs and an additional $160 annually per megawatt hour.
- Drinking water systems: an additional $110,000 to $500,000 annually.

Other economic losses associated with aquatic invasive species:

- $11 million annually to Orange and Lachloosa Lake in Florida ($1/7^{th}$ the size of Flathead Lake) due to aquatic weed infestations.
- $445 million predicted loss in British Columbia if a $350,000 aquatic plant control program was terminated ($85 million in tourism revenue (1,700 jobs) and $360 million in real estate values).
- Great Lakes: 10 to 20% decrease in property values, 11 to 35% decrease in recreational fishing, 13 to 33% decrease in commercial fish landings and an additional cost to raw water users from $30,000 to $118,000 per facility.

The potential economic impact of an infestation to the State of Montana does not exist. It is likely that it would be measured in the millions of dollars similar to Idaho. The economic impact would be felt in the following ways:

- 10 to 30% decrease in tourism;
- 10 to 20% increase in utility rates;
- 10 to 20% decrease in property values and taxes;
- 10 to 20% increase in maintenance and operations for water infrastructure; and
- Millions of dollars of capital costs for new infrastructure.

In Montana, recreational boating and fishing contribute $671 million to Montana's economy. A 10% decrease would equal a loss of $67 million to local communities.